

A  
supplying the first jet of fluorine-based gases to the silica soot deposited onto the bait rod via the first gas-feed subsequent to vaporizing at least a portion of the silica producing gas within the reactant flame of the burner.

---

Remarks

In view of the above amendments and the following remarks, favorable reconsideration of the outstanding office action is respectfully requested.

Attached hereto is a page entitled "Version of Markings to Show Changes Made."

Claims 1-13 remain in this application. Claim 1 has been amended. Claims 14-21 have previously been withdrawn from consideration, without prejudice.

**1. § 103 Rejections**

The Examiner has rejected claims 1-2 and 7-13 under 35 U.S.C. § 103 as being unpatentable for obviousness over Japanese Patent No. 406122527 (and its abstract) taken alone or with U.S. Patent 4,221,825 to Guerder et al.

JP 406122527 to Ito et al. teaches a VAD (Vapor Axial Deposition) method wherein a first burner 1 is supplied with O<sub>2</sub>, H<sub>2</sub>, SiCl<sub>4</sub> and GeCl<sub>4</sub> to form the core, a second burner 2 is supplied with O<sub>2</sub>, H<sub>2</sub>, and SiCl<sub>4</sub> to form the clad, and an auxiliary burner 15 (between burners 1 and 2) is supplied with O<sub>2</sub>, H<sub>2</sub>, and CF<sub>4</sub> to provide F doping of a preform free from spreading at the skirt part.

Guerder et al (US 4,221,825) teach a plasma VAD method wherein one nozzle 26 delivers a silica-containing precursor compound (such as SiCl<sub>4</sub>) while the other nozzle 24 delivers a fluorine gas to the plasma flame 22 generated from a plasma burner. Optionally, the fluorine-containing gas (NF<sub>3</sub> or SF<sub>6</sub>) may be delivered to the nozzle 26 as a mixture with the SiCl<sub>4</sub>.

Neither Ito et al '527 nor Guerder et al '825, alone or in combination, teach or suggest the claimed invention, as amended. First, both Ito and Guerder teach a VAD method. In such a method there is no bait rod (conventionally described as a rod onto which soot is radially deposited along its length). In Ito, there is a starting rod, but the deposition takes place on the *axial end* thereof as opposed to the radial surface of the bait rod in the present OVD invention. Further, in Guerder, the fluorine-gas and the silica-producing gas are introduced into the plasma flame at the same time. As such, the jet of fluorine-based gases is not supplied to the silica soot deposited onto the bait rod ... subsequent to vaporizing at least a portion of the silica producing gas, as required in the claim. In fact, in Guerder, the

Please direct any questions or comments to Randall S. Wayland at 607-974-0463.

Respectfully submitted,

CORNING INCORPORATED

Date: 3/3/03

Randall S. Wayland

Randall S. Wayland  
Registration No. 36,303  
Corning Incorporated  
Patent Department  
Mail Stop SP-TI-03-1  
Corning, NY 14831

**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8:** I hereby  
certify that this correspondence is being deposited with the United States  
Postal Service as first class mail in an envelope addressed to Asst.  
Commissioner of Patents and Trademarks, Washington, D.C. 20231 on

3/3/03  
Date of Deposit

Randall S. Wayland  
Name of applicant, assignee, or  
Registered Representative  
Randall S. Wayland  
Signature  
3/3/03  
Date of Signature

## VERSION OF MARKINGS TO SHOW CHANGES MADE

(Amended) 1. A method for doping silica soot with fluorine during laydown, comprising the steps of:

providing a bait rod;

providing a burner, the burner emitting a reactant flame;

providing at least one first gas-feed separated from the burner, the gas-feed being in fluid communication with a source for supplying a first jet of fluorine based gases from the source;

depositing on a radial surface of the bait rod a layer of silica soot on the bait rod by vaporizing a silica producing gas emitted from the burner within the reactant flame of the burner; and

supplying the first jet of fluorine-based gases to the silica soot deposited onto the bait rod via the first gas-feed subsequent to vaporizing at least a portion of the silica producing gas within the reactant flame of the burner.



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Lehman, et al. )  
)  
Serial No: 10/033,144 ) Art Group Unit: 1731  
)  
Filing Date: 10/26/2001 ) Examiner: J. Derrington  
)  
Title: AN APPARATUS AND METHOD )  
OF DOPING SILICA WITH )  
FLUORINE DURING LAYDOWN )

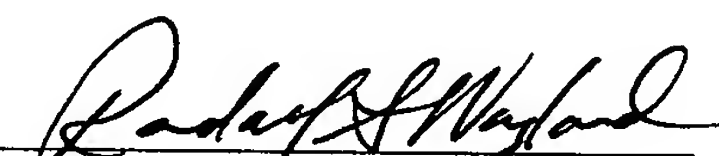
Assistant Commissioner of Patents  
Washington, D.C. 20231

**REQUEST FOR EXTENSION OF TIME TO RESPOND TO OFFICIAL ACTION**

Applicants, through counsel, respectfully request a two (2) month extension of time pursuant to 37 C.F.R. § 1.136(a), or such other extension of time as is necessary, to respond to the Office Action dated October 1, 2002, currently due. Please charge the fee of \$410.00, and any additional fees or surcharges necessary to make this response timely, to the deposit account of the undersigned corporation, Deposit Account No. 03-3325, and credit any overpayment.

Respectfully submitted,

Date: 3/3/03

  
Attorney/Agent for Assignee  
Randall S. Wayland  
Reg. No.: 36,303  
Corning Incorporated  
SP-TI-3-1  
Corning, NY 14831  
607-974-0463

03/10/2003 TBESHAH1 00000049 033325 10033144  
01 FC:1252 410.00 CH

**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8:** I hereby certify that this paper and any papers referred to herein are being deposited with the U.S. Postal Service, as first class mail, postage prepaid, addressed to the Assistant Commissioner of Patents, Washington, D.C. 20231 on 3/3/03

  
Randall S. Wayland(Signature)

RECEIVED  
MAR 11 2003  
TC 1700